

## Development of an occulting mask for observations of feeble light emissions close to a planet disk (II)

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When we try to observe feeble light emissions close to a bright main body in the solar system, intense solar light scattered by the main body is always a severe obstacle. Placing a mask at the primary focal plane of the optics will overcome this problem.

We have fabricated a mask using a newly installed vacuum evaporation facility for this purpose. The mask was made in a way that chromium oxide was vacuum evaporated with a diameter of 0.6mm on a optical glass substrate whose surface roughness is one lambda. This mask was utilized in an observation of sodium clouds around Jupiter, carried out at Haleakala,Hawaii with a monochromatic imager in January, 2002. The mask efficiently suppressed the scattered light of Jovian disk, while position of Io can be discernible through it. On the other hand, stray light caused by Jovian image reflection at the mask was not negligible.

We will present evaluation of the fabricated mask and discuss how to improve the characteristics of mask.